DOCKET NO.: 215255US90/mya

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:
Yukiko HANADA, et al.

SERIAL NO: 09/981,988 GROUP: 2631

FILED: October 19, 2001 EXAMINER:

FOR: SPREADING CODE SYNCHRONIZATION METHOD, RECEIVER, AND MOBILE STATION

LETTER

Mail Stop DD
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith is a Singapore Search Report and Written Opinion for the Examiner's consideration. The reference(s) cited therein have been previously filed on January 22, 2002 and September 5, 2003.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

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In Reply Please Quote Our Reference

Seen
LSD : 10/12/05

Your Ref	:	MJ/GK/LWC/PAT/8107052/SG
Our Ref	:	2001064922/041210/TMABS/4293
Date	:	10/12/2004
Writer's Direct Line	:	6330 2748

DREW & NAPIER LLC
P.O. BOX 152, ROBINSON ROAD POST OFFICE
SINGAPORE 900302

Dear Sir,

Singapore Patent Application No.: 200106492-2
Title of invention: SPREADING CODE SYNCHRONIZATION METHOD, RECEIVER, AND MOBILE STATION
Applicant(s) / Proprietors(s): NTT DOCOMO, INC. (JP)

INVITATION TO RESPOND TO WRITTEN OPINION

We forward with this letter a copy of the Search Report and Written Opinion drawn up by the Examiner in connection with your request for a Search and Examination Report.

You are invited to respond to the opinion by submitting:

(a) Written arguments disagreeing with the Examiner's opinion and/or
(b) An amendment of the specification of the application.

If you intend to respond, the response must be filed within **5 months** from the date of this letter. You are also advised to inform us early if you do not intend to respond.

The Examiner will proceed to establish the Examination Report if no response is received by the end of the allowed period.

If you have any further queries, please do not hesitate to contact the undersigned.

Thank you.

Yours faithfully,

Annie Besant d/o Surendran
for REGISTRAR OF PATENTS
SINGAPORE

CC: IP AUSTRALIA

AUSTRALIAN PATENT OFFICE
SEARCH REPORT

Applicant's or agent's file reference MJ/GK/LWC/PAT/8107052/SG		
Application No. SG 200106492-2	Application Filing Date *(day/month/year)* 19 October 2001	(Earliest) Priority Date *(day/month/year)* 19 October 2000
Applicant NTT DOCOMO, INC. (JP)		

This search report consists of a total of 4 sheets.

[X] It is also accompanied by a copy of each prior art document cited in this report.

1. [ ] **Certain claims were found unsearchable** (See Box I)

2. [ ] **Unity of invention is lacking** (See Box II)

3. [ ] The application contains disclosure of a **nucleotide and/or amino acid sequence listing** and the search was carried out on the basis of the sequence listing

   [ ] filed with the application

   [ ] furnished by the applicant separately from the application,

   [ ] but not accompanied by a statement to the effect that it did not include matter going beyond the disclosure in application as filed

4. With regard to the **title,**

   [X] the text is approved as submitted by the applicant.

   [ ] the text has been established by this Office to read as follows:

5. With regard to the **abstract,**

   [ ] the text is approved as submitted by the applicant

   [X] the text has been established by this Office as it appears in Box III

6. The figure of the **drawings** to be published with the abstract is Figure No. 1

   [ ] as suggested by the applicant.

   [ ] because the applicant failed to suggest a figure

   [X] because this figure better characterises the invention

   [ ] None of the figures

AUSTRALIAN PATENT OFFICE

SEARCH REPORT

Application No.

SG 200106492-2

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

Disclosed is a method for fast cell search during soft hand-over in an inter-cell asynchronous system. During spreading code synchronisation correlation between a received signal and a common short code is made which is then used to determine a scrambling code mask. The received scrambling code mask of the current cell is excluded in the search for hand-over destination cells. For each candidate scrambling code the correlation between the received signal and a code of a product of a scrambling code and a common short code at the received timing of the scrambling code mask of a detected hand-over destination cell is detected. The correlation values are used to identify the scrambling code of the hand-over destination cell.

AUSTRALIAN PATENT OFFICE

SEARCH REPORT

Application No.
SG 200106492-2

A. CLASSIFICATION OF SUBJECT MATTER

According to International Patent Classification (IPC)
Int. Cl. [7] H04B 7/26

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
ked on 01/22/02 X	EP 0825737 A1 (NTT MOBILE COMMUNICATIONS NETWORK INC.) 25 February 1998 Whole document including column 17 lines 5 to 17.	1 to 13
ked on 9/5/03 X	"UMTS Terrestrial Radio Access Concept Evaluation", ETSI TECHNICAL REPORT, December 1997, pages 47 to 48.	1 to 13
ked on 9/5/03 X	HANADA Y et al: "Fast Cell Search Algorithm in Idle Mode for Inter-cell Asynchronous W-CDMA Mobile Radio", Cryptologia, Laguna Hills, CA, US, Vol. E83B, no. 8 August 2000, pages 1610 to 1618.	1 to 13

☐ Further documents are listed in the continuation of Box C ☒ See patent family annex

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of submission of the request to the Australian Patent Office	Date of completion of the search report	Date of mailing of the search report
23 July 2004	23 September 2004	- 6 OCT 2004

Name and mailing address
AUSTRALIAN PATENT OFFICE
PO BOX 200, WODEN ACT 2606, AUSTRALIA
E-mail address: pct@ipaustralia.gov.au
Facsimile No. 61 2 62853929

Authorised officer
RICHARD REED

AUSTRALIAN PATENT OFFICE

SEARCH REPORT

PATENT FAMILY MEMBERS

Application No.

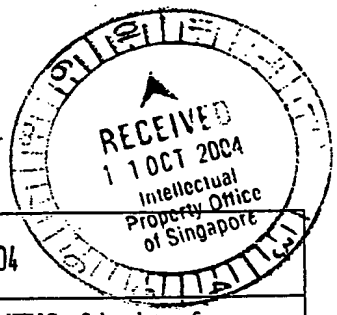
SG 200106492-2

Patent Document Cited in Search Report	Patent Family Member					
EP 0825737	CA	2217575	CN	1180463	CN	1197549
	CN	1390000	EP	0839392	JP	9307153
	JP	10004224	JP	10004225	JP	10012941
	JP	10012942	US	5998909	US	6167037
	WO	9733400	WO	9743791		

Due to data integration issues this family listing may not include 10 digit Australian applications filed since May 2001.

END OF ANNEX

AUSTRALIAN PATENT OFFICE



WRITTEN OPINION

	Date of mailing *day/month/year* - 6 OCT 2004
Applicant's or agent's file reference MJ/GK/LWC/PAT/8107052SG	**REPLY DUE** within FIVE MONTHS of the date of the Registrar's letter enclosing the written opinion

Application No.	Application Filing Date *(day/month/year)*	Priority Date *(day/month/year)*
SG 200106492-2	19 October 2001	19 October 2000

International Patent Classification (IPC) (as indicated in the search report)

Int. Cl. [7] H04B 7/26

Applicant

NTT DOCOMO, INC. (JP)

1. This First written opinion consists of a total of 4 sheets.
2. This opinion contains indications relating to the following items:.

I	[X]	Basis of the opinion
II	[ ]	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
III	[ ]	Lack of unity of invention
IV	[X]	Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
V	[ ]	Certain documents cited
VI	[ ]	Certain defects in the application
VII	[X]	Certain observations on the application

3. This opinion is based upon the assumption that the priority claim is valid.
4. The search report used was issued by the **Australian Patent Office**, and the date of completion is: **23 September 2004**
5. If no reply is filed, the examination report will be established on the basis of this opinion.
6. The date by which the examination report will be established is: **19 January 2005**

Name and mailing address	Authorized Officer
AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile no. 61 2 62853929	**RICHARD REED**

AUSTRALIAN PATENT OFFICE

WRITTEN OPINION

Application No.
SG 200106492-2

I. Basis of the opinion

1. This opinion has been drawn on the basis of:

[X] the application as originally filed.

[ ] the description, pages , as originally filed,
pages , filed with the request,
pages , received on with the letter of

[ ] the claims, pages , as originally filed,
pages , filed with the request,
pages , received on with the letter of

[ ] the drawings, sheets/fig. , as originally filed,
sheets/fig. , filed with the request,
sheets/fig. , received on with the letters of

[ ] the sequence listing part of the description:
pages , as originally filed
pages , filed with the demand
pages , received on with the letter of

2. The amendments have resulted in the cancellation of: pages:
sheets of drawings/figures No :

3 [ ] This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box.

4. Additional observations, if necessary:

Abstract

AUSTRALIAN PATENT OFFICE

WRITTEN OPINION

Application No.

SG 200106492-2

IV. Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims **None**	YES
	Claims **1 to 13**	NO
Inventive step (IS)	Claims **None**	YES
	Claims **1 to 13**	NO
Industrial applicability (IA)	Claims **1 to 13**	YES
	Claims **None**	NO

2. Citations and explanations

The associated search report cited:

D1 = EP 0825737 A1 (NTT MOBILE COMMUNICATIONS NETWORK INC.) 25 February 1998

Whole document including column 17 lines 5 to 17

D2 = "UMTS Terrestrial Radio Access Concept Evaluation", ETSI TECHNICAL REPORT, December 1997, pages 47 to 48.

D3 = HANADA Y et al: "Fast Cell Search Algorithm in Idle Mode for Inter-cell Asynchronous W-CDMA Mobile Radio", Cryptologia, Laguna Hills, CA, US, Vol. E83B, no. 8 August 2000, pages 1610 to 1618.

Novelty

Claims 1 to 13 lack novelty in light of D1 to D3. These documents separately teach a fast synchronisation scheme for W-CDMA using a masked and unmasked version of a long spreading code where each spreading code is specific to a cell and a common short spreading code. The scheme leads to "received timings" which are subsequently used to orientate long code detection.

Inventive Step

Claims 1 to 13 define an invention that lacks an inventive step in light of D1 to D3. This follows since all features are taught.

Industrial Applicability

Claims 1 to 13 define an invention having industrial applicability in the field of mobile communications and the determination of a correct spreading code.

AUSTRALIAN PATENT OFFICE

WRITTEN OPINION

Application No.

SG 200106492-2

VII. Certain observations on the application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

[X] The claimed invention is patentable according to Section 13(2); or

[ ] The claimed invention is unpatentable according to Section 13(2) because: